

IN THE CLAIMS:

1-76. (cancelled)

77. (new) An isolated polypeptide comprising an amino acid sequence of SEQ ID NO:8 or SEQ ID NO:9, or a fragment of said polypeptide, wherein said fragment has the ability to stimulate at least one endothelial cell biological activity selected from the group consisting of cell proliferation, cell differentiation, cell migration, cell survival or vascular permeability.

78. (new) A polypeptide according to claim 77, wherein said endothelial cells are selected from the group consisting of vascular endothelial cells and lymphatic endothelial cells.

79. (new) A polypeptide according to claim 77, which comprises a sequence of amino acids corresponding to SEQ ID NO:8 or SEQ ID NO:9.

80. (new) An isolated mature bioactive VEGF-D polypeptide.

81. (new) An isolated mature bioactive VEGF-D of Claim 80, which is a human polypeptide.

82. (new) An isolated mature bioactive VEGF-D of Claim 80, wherein said polypeptide has the ability to stimulate at least one endothelial cell biological activity selected from the group consisting of cell proliferation, cell differentiation, cell migration, cell survival or vascular permeability.

83. (new) An isolated mature human VEGF-D polypeptide of Claim 80, consisting essentially of an amino acid sequence corresponding to position 101-196 of SEQ ID NO: 5.

84. (new) An isolated mature human VEGF-D polypeptide of Claim 80, consisting essentially of an amino acid sequence corresponding to position 93-201 of SEQ ID NO: 5.

85. (new) An isolated mature human VEGF-D polypeptide of Claim 80, consisting essentially of an amino acid sequence corresponding to position 92-205 of SEQ ID NO: 5.

86. (new) An isolated mature human VEGF-D polypeptide of Claim 80, wherein the polypeptide is encoded by a polynucleotide which remains hybridized under a washing condition of 42°C in 0.2X SSC with a nucleic acid molecule encoding a polypeptide consisting essentially of an amino acid sequence corresponding to position 92-105 of SEQ ID NO: 5.

87. (new) An isolated polypeptide consisting essentially of an amino acid sequence of SEQ ID NO:3 or a fragment thereof, wherein said polypeptide or fragment has the ability to stimulate at least one endothelial cell biological activity selected from the group consisting of cell proliferation, cell differentiation, cell migration, cell survival or vascular permeability.

88. (new) A polypeptide according to claim 80, further comprising an affinity tag peptide sequence.

89. (new) A pharmaceutical composition comprising a polypeptide according to claim 80, and a pharmaceutically acceptable carrier or adjuvant.

90. (new) A pharmaceutical composition according to claim 89, further comprising at least one substance selected from the group consisting of VEGF, VEGF-B, VEGF-C, PlGF, PDGF, FGF and heparin.

91. (new) A protein dimer comprising a first polypeptide according to Claim 80, and a second polypeptide.

92. (new) A protein dimer according to claim 91, wherein said protein dimer is a homodimer in which the second polypeptide is identical to the first polypeptide.

93. (new) A protein dimer according to claim 91, wherein said protein dimer is a heterodimer in which the second polypeptide is VEGF, VEGF-B, VEGF-C, PlGF or PDGF.

94. (new) A polypeptide according to claim 80, which has the ability to stimulate proliferation of endothelial cells.

95. (new) A polypeptide according to claim 80, which has the ability to induce endothelial cell differentiation.

96. (new) A polypeptide according to claim 80, which has the ability to induce vascular permeability.